

foot below the surface in the back yard. He states that the system has been found to work admirably, winter and summer, wherever tried.

It may be stated that the efforts that have hitherto been made to utilize the fertilizing properties of sewage have not been profitable, unless in the way of irrigation. Fine crops have been raised on such sewage farms; so that where intermittent filtration is adopted, it is advisable to combine sewage farming with it to lessen the expense.

THE CHEMICAL PROCESSES used so far have not been found to purify the sewage thoroughly by themselves, so that natural or artificial filtration must supplement any chemical treatment. Besides this objection to the chemical method, its cost and difficulty of manipulating the accumulations of sewage sludge both make against it; still much of this sludge must be removed in some way before filtration can be employed.

In seaboard towns, the natural outfall for the sewage is the sea. If possible the sewage should be carried to such a distance as not to be brought back to the town by wind, tides or current. The same remarks apply to towns situated on tidal streams and estuaries.

CAUTION TO OUR CITIES.—Most of our large towns have a clean slate for sewerage systems. Let not a single sewer be built until a competent engineer plans the entire system, otherwise the sewers may have to be torn up eventually, or the engineer may be considerably embarrassed in his designs.

#### THE LIEURNUR SYSTEM.

In a paper read before the Austrian Society of Engineers, Vienna (see Baldwin Latham's "Sanitary Engineering," Am. ed.), Mr. J. Chailly says:

"The two conditions of removal without producing disagreeable odors, and carrying off the matter in short periods, are almost entirely fulfilled in Lieurnur's Pneumatic Sewerage system, in which the iron waste-pipes, which are water-tight and air-tight, are united to a system of iron-pipes which run into a